

CLAIMS

What is claimed is:

1. Linear guide comprising a guide rail (25) on which a guide carriage (26) is supported for movement longitudinally, and a drive to cause the longitudinal movement of the guide carriage (26), the drive being formed as an electric motor with a first motor element arranged on the guide rail (25) and a second motor element arranged on the guide carriage (26), and a distance-measuring system on the linear guide, which includes a measuring strip (31) and a measuring head (30) movable relative to the measuring strip adjacent to the guide carriage (26) or the guide rail (25) and extending parallel to the guide rail (25), wherein the distance-measuring system includes an acceleration sensor having an eddy current sheet and an exciter block (28) surrounding at least a portion thereof.
2. Linear guide according to claim 1, wherein the acceleration sensor is a sensor operating according to the Ferraris principle, and the eddy current sheet is formed of a non-magnetizable metal and the exciter block includes permanent magnets.
3. Linear guide according to claim 2, wherein the eddy current sheet function is performed by the guide rail (25) which is manufactured of an anti-magnetic hardenable roller bearing steel.
4. Linear guide according to claim 2, wherein a cover band (32) of a non-magnetic material is used as the eddy current sheet which is installed in an elongated groove of the guide rail (25).

5. Linear guide according to claim 2, wherein the exciter block (28) is constructed U-shaped and is arranged in a separate housing (27) which is fastened to the guide carriage (25).
6. Linear guide according to claim 5, wherein the housing (27) for the exciter block (28) is arranged on a face of the guide carriage (26) pointing in a direction of travel.
7. Linear guide according to claim 1, wherein the measuring head (30) of the distance-measuring system is arranged in a housing (29) which is fastened on the guide carriage (26) on a face pointing in a direction of travel.
8. Linear guide according to claim 2, wherein the eddy current sheet function is performed by a rotating disk which is drivable by the guide rail.
9. Linear guide comprising a guide rail arranged in a guide housing (35) on which a traveling carriage is supported for movement longitudinally, and with a drive to cause the longitudinal movement of the traveling carriage (36), the drive being formed as an electric motor with a first motor element arranged on the guide rail and a second motor element arranged on the traveling carriage (36), and a distance-measuring system allocated to the linear guide, the distance-measuring system including an acceleration sensor with an eddy current sheet (41) and an exciter block (42) operating according to the Ferraris principle, whereby the eddy

current sheet (41) is made of an electrically conducting, non-magnetizable material and the exciter block (42) includes permanent magnets.

10. Linear guide according to claim 9, wherein the eddy current sheet (41) is part of a beam having a U-shaped cross section which forms a cable channel (39) for a drag chain (38).
11. Linear guide according to claim 10, wherein the beam (40) is fastened on a longitudinal side of the guide housing (35).
12. Linear guide according to claim 9, wherein the exciter block (42) is constructed U-shaped in cross section and the eddy current sheet (41) is partially surrounded by the exciter block (42).
13. Linear guide according to claim 9, wherein the exciter block (42) is held by a driver strap (43) which is fastened on a longitudinal side of the traveling carriage (38).
14. Linear guide according to claim 9, wherein the eddy current sheet (41) is made of aluminum.
15. Linear guide according to claim 9, wherein the eddy current sheet (41) is made of copper.